What is claimed is:

1. A method of controlling at least one line rate corresponding to communication in a first direction over a line coupling a first digital subscriber line modem located in a central office and a second digital subscriber line modem located at a customer's premises together, the method comprising:

establishing a communications session including communication in said first direction between said first modem and said second modem at a first line rate as a function of a first signal noise measurement, said step of establishing a communications session including performing a synchronization operation to synchronize communication between said first modem and said second modem in said first direction;

making a second signal noise measurement;

generating as a function of said second signal noise measurement, a second signal noise measurement value;

comparing said second signal noise measurement value to a first rate adjustment threshold; and

changing said at least one line rate as a function of the result of said comparison of said second signal noise measurement value to said first rate adjustment threshold, when said second signal noise measurement values differs from said first rate adjustment threshold in a pre-selected manner, without performing a resynchronization operation.

2. The method of claim 1,

wherein said second signal noise measurement is a signal to noise measurement; and

wherein said second signal noise measurement value is a signal to noise value.

3. The method of claim 1,

wherein said first rate adjustment threshold is a rate increasing threshold; and

wherein said step of changing said at least one line rate as a function of the result of said comparison includes:

increasing said line rate when said second signal noise measurement value exceeds said first rate adjustment threshold.

4. The method of claim 3, further comprising:

comparing said second signal noise measurement value to a second rate adjustment threshold; and

changing said at least one line rate as a function of the result of said comparison of said second signal noise measurement value to said second rate adjustment threshold, when said second signal noise measurement values differs from said second rate adjustment threshold in a pre-selected manner, without performing a resynchronization operation.

5. The method of claim 4,

wherein said second rate adjustment threshold is a rate decreasing threshold; and

wherein said step of changing said at least one line rate as a function of the result of said comparison includes:

decreasing said line rate when said second signal noise measurement value is below said first rate adjustment threshold.

6. The method of claim 1,

wherein said first rate adjustment threshold is a rate decreasing threshold; and

wherein said step of changing said at least one line rate as a function of the result of said comparison includes:

decreasing said line rate when said second signal noise measurement value is below said first rate adjustment threshold.

7. The method of claim 1, wherein said second modem makes said second signal to noise measurement and performs said comparing operation, the method further comprising:

operating said second modem to transmit a request for a change in said line rate to said first modem; and

operating said first modem to send a command to said second modem to write a new line rate into a register included in said second modem.

8. The method of claim 7, wherein said request for a change in said line rate and said command are transmitted over said line using an embedded operations channel.

9. The method of claim 1, wherein said central office further includes a provisioning system, the method further comprising:

operating said provisioning system to receive a request for a change in a subscriber line rate from a subscriber using said line;

operating the provisioning system to modify subscriber line rate information included in said first modem; and

operating the first modem to write a new line rate to said second modem while maintaining the established communications session and without performing a resynchronization operation.

10. The method of claim 9, further comprising:

transmitting said request for change in the subscriber line rate to said provisioning system over said line, said request being for a higher line rate than a current maximum permitted subscriber line rate.

11. The method of claim 10, further comprising:

tracking the amount of time said subscriber's maximum permitted line rate is set to the higher line rate; and

billing the subscriber based on the amount of time the subscriber's maximum permitted line rate is set to the higher line rate.

12. A communications system, comprising:

a digital subscriber line;

a first modem located at a telephone central office coupled to a first end of said digital subscriber line;

a customer modem located at a customer's premises coupled to a second end of said digital subscriber line, the customer modem including:

i) means for periodically monitoring the signal to noise condition on said line during a communications session established between said first modem and said customer modem;

ii) means for requesting a change in line rate from said first modem in response to detecting a signal to noise condition which does not cause a loss in synchronization with said first modem but differs from a predetermined threshold in a preselected manner;

said first modem including:

i) means for establishing a communications session at an initial line rate determined as a function of a first signal noise measurement; and

ii) means for generating a command to write a new line rate into said customer modem in response to a request for a new line rate received from said customer modem without interfering with an established communications session between said first modem and said customer modem and without performing a resynchronization operation..

13. The system of claim 12, wherein said customer modem includes memory for storing said predetermined threshold, said predetermined threshold being a rate increasing threshold.

14. The system of claim 12, wherein said customer modem includes memory for storing said predetermined threshold, said predetermined threshold being a rate decreasing threshold, said rate decreasing threshold being a threshold signal to noise value which is higher than a signal to noise value which results in loss of synchronization between said first modem and said customer modem.

15. The system of claim 13, wherein said customer modem includes means for transmitting said request for a new line rate to said first modem over an embedded operations channel.